Claims

What is claimed is:

1. A method of providing bandwidth on demand in a broadband communications system, comprising:

establishing a default connection between a subscriber data processing system and a content-provider data processing system, said default connection comprising an asynchronous transfer mode (ATM) permanent virtual circuit (PVC);

initiating a bandwidth-on-demand session by creating one or more switched virtual circuits (SVCs) between said subscriber data processing system and said content-provider data processing system to supplement the bandwidth of said default connection; and

ending said bandwidth-on-demand session by terminating said one or more SVCs.

2. The method of claim 1 wherein said step of initiating a bandwidth-on-demand session comprises sending a message from said subscriber data processing system to a proxy signaling server comprising information related to said bandwidth-on-demand session and, in response to said message, sending a message from said proxy signaling server to an ATM edge device to create one or more SVCs between said subscriber data processing system and said content-provider data processing system.

3. The method of claim 2 wherein said information comprises data for authenticating said subscriber.

4. The method of claim 2 wherein said message from said proxy signaling server comprises User Network Interface (UNI) signals.

5. The method of claim 2 wherein said step of ending said bandwidth-on-demand session comprises sending a message from said subscriber data processing system to a proxy signaling server comprising an instruction to end said bandwidth-on-demand session and, in response to said message, sending a message from said proxy signaling server to an ATM edge device to terminate said one or more SVCs between said subscriber data processing system and said content-provider data processing system.

6. The method of claim 2 wherein said ATM edge device comprises an ATM switch.

7. The method of claim 6 wherein said step of initiating a bandwidth-on-demand session comprises a subscriber using a client-side application on said subscriber data processing system to request said bandwidth-on-demand session.

8. The method of claim 7 wherein client-side application comprises a web browser plug-in.

9. The method of claim 7 wherein said client-side application comprises a dialer application.

10. A broadband communication system for providing bandwidth-on-demand, comprising:

a subscriber data-processing system for providing a subscriber with access to said communication system;

a digital subscriber line (DSL) modem for modulating and demodulating data for transmission over a local loop telephone line to a DSL multiplexer (DSLAM);

an asynchronous transfer mode (ATM) edge device in communication with said DSLAM for receiving data from and transmitting data over an ATM network;

a proxy signaling server in communication with said subscriber data processing system;

a content-provider data processing system in communication with said ATM network for providing broadband content to a subscriber;

a client-side application on said subscriber data processing for use by said subscriber to request a bandwidth-on-demand session and for transmitting information to said proxy signaling server in response to said request; and

a connection-management application on said proxy signaling server for receiving said information and for signaling to said ATM edge device on behalf of said CPE to establish one or more switched virtual circuits (SVCs) from said CPE to said content-provider data processing system.

11. The system of claim 10 wherein said digital subscriber line (DSL) modem is supports bridge mode.

12. The system of claim 11 wherein said proxy signaling server uses User Network Interface (UNI) signaling to signal said ATM switch on behalf of said CPE.

13. The system of claim 12 wherein said client-side application comprises a web browser plug-in.

14. The system of claim 12 wherein said client-side application comprises a dialer application.

15. The system of claim 12 wherein said ATM edge device comprises an ATM switch.

16. A communications system, comprising:

a subscriber data processing system for use by a subscriber to transmit and receive data to and from a remote content-provider data processing system;

client premise equipment (CPE) in communication with said subscriber data processing system for transmitting and receiving said data over a local loop to a DSL multiplexer (DSLAM);

an asynchronous transfer mode (ATM) edge device in communication with said DSLAM for transmitting and receiving said information over an ATM network;

a proxy signaling server in communication with said subscriber data processing system and said ATM edge device;

means in said subscriber data processing system, responsive to said subscriber, for sending a request to said proxy signaling sever to initiate a bandwidth-on-demand session; and

means in said proxy signaling server, responsive to said request, for initiating said bandwidth-on-demand session by creating one or more Switched Virtual Circuits (SVCs) between said subscriber data processing system and said content-provider data processing system.